RSM 3052 Course Outline
Marketing (Spring 2022)
Course Meets: Mondays 9AM-12PM, Rotman School of Management, Online

Instructor: Avi Goldfarb, Room 578
E-Mail: avi.goldfarb@rotman.utoronto.ca
Homepage: http://www.avigoldfarb.com
Phone: 416-946-8604
Office Hours: By Appointment

Objectives: The purpose of this course is to introduce students to the key questions and most common methods used in quantitative marketing. The practice of finance has transformed over the past several decades to be a primarily quantitative field, rooted in ideas from economics. I believe the same process is now happening in marketing. Marketing practice is increasingly quantitative. Many of the most exciting marketing companies in the world apply marketing principles in highly technical ways, including Google, Facebook, and Amazon. This transformation of practice was preceded by the rise of the field of quantitative marketing.

A key theme is that rigor is a necessary condition for relevance. In other words, while there are rigorous papers that are not relevant, a research paper cannot be relevant if it is not rigorous. Without careful attention to detail and appropriate use of techniques, research should not be trusted to influence marketing practice or marketing policy.

In each class, we will work through research papers that build rigorous quantitative models of important marketing phenomena. Many of these papers take a social science perspective, with an emphasis on understanding the decisions of managers and consumers. Others take more of an engineering perspective, focusing on designing marketing tools.

Preparation and Prerequisites: The course is meant to be accessible to all marketing PhD students, regardless of the stream though aspects of the course will be technical and use advanced economics and econometrics. It will complement the rest of the first year marketing sequence, building on ideas from the consumer behavior course in the fall and from basic microeconomics and statistics. For those in the quantitative track, you will be expected to have a deep understanding the economics and econometrics material from the fall courses.

Class Structure: In class, we will engage in a detailed discussion of the assigned papers. We will discuss research questions, techniques, and the links between the research papers. At the end of each class, I will provide a brief introduction to the topic of the next class, in a format similar to how I teach MBAs. This will frame the discussion on the relevant quantitative papers in the next class. Class will involve a mix of PowerPoint slides, whiteboard derivations, and class discussion.
Assignments & Grading

**Problem sets: 30%**
There will be 6 problem sets worth 5% each. Problems sets will be handed out during class the week before they are due. Each problem set will have three parts: (i) Identify the research question and core result in a paper, (ii) relate the research question to a traditional marketing concept, (iii) formally derive and interpret the key results of the relevant papers on a topic. The first two parts will anticipate future classes, while the third part will be based on material we have already covered.

**Presentations: 20%**
Each student will give two 20 minute presentations over the term, focusing on papers of their choosing. Suggested papers for presentation are highlighted in the syllabus with **.

**Final exam: 50%**
Questions will look like problem set questions, open book but time constrained.

Readings
A number of papers have been assigned each week.

*Means that everyone in the class (including those auditing) should have read the paper before coming to class.
**Means that it is a suggested paper for presentation.

In addition to those marked with a *, each student should read at least one other paper carefully and be ready to discuss it in class. Books are marked with a +, and are meant for students who want to dig into the subject deeply, perhaps after the term is over.

Note that in deciding on the topics and papers, I have biased toward topics that Rotman professors know well, and papers that I know well (particularly my own!). This is to ensure expertise, and you should recognize that it comes at the expense of a truly broad and unbiased view of the field.

Questions to ask when reading a paper

1) What is the research question?
2) What is the main result?
3) What results (if any) help explain this main result?
4) Does the interpretation follow the analysis?
5) How are the results communicated?

If empirical:
a) What is the core identification challenge?
b) What is the data structure?
<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Deliverables</th>
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<tbody>
<tr>
<td>January 3</td>
<td>Quantitative marketing</td>
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<td>January 10</td>
<td>Demand estimation</td>
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<td>January 17</td>
<td>Advertising</td>
<td>Problem set #1</td>
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<td>January 24</td>
<td>Pricing, product lines, and CRM</td>
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<td>January 31</td>
<td>Distribution and sales force management</td>
<td>Problem set #2</td>
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<td>February 7</td>
<td>Search, learning, and loyalty</td>
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<td>February 14</td>
<td>Branding</td>
<td>Problem set #3</td>
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<td>February 21</td>
<td>READING WEEK NO CLASS</td>
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<td>February 28</td>
<td>Behavioral marketing</td>
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<td>March 7</td>
<td>Diffusion</td>
<td>Problem set #4</td>
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<td>March 14</td>
<td>Technological change and AI</td>
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<td>March 21</td>
<td>Digitization</td>
<td>Problem set #5</td>
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<td>March 28</td>
<td>Platforms, social media, and entrepreneurship</td>
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<td>April 4</td>
<td>Marketing policy</td>
<td>Problem set #6</td>
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<td>April 11</td>
<td>Final exam</td>
<td>3 hours. Open book.</td>
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Week 1: Quantitative Marketing

Perspectives

Methods

Data
Week 2: Demand Estimation

**Conjoint**


**Scanner data**


**Other**


Week 3: Advertising

Theory


Empirics—Offline


Empirics—Online


Week 4: Pricing, product lines, and CRM

**Price and Demand**


**Price Promotions**


**Product Choices**


**Customer Relationship Management**


Week 5: Distribution and sales force management

Retailing


Online/Offline


Sales force management


Search


Learning


Loyalty


Week 7: Branding


**Week 8: Behavioral marketing**


**Consumers**


**Firms**


**Week 9: Diffusion**


**Week 10: Technological Change and Artificial Intelligence**

*Technological change*


*Artificial Intelligence and Data-Driven Decision-Making*


**Week 11: Digitization**


Akchurina, Dinara and Paulo Albuquerque. 2019. Study before play: Pairing educational and entertaining content to align usage and purchase decisions.


Week 12: Platforms, Social Media, and Entrepreneurship

Platforms and Two-sided markets


Social Media and Word of Mouth


Entrepreneurship


Week 13: Marketing policy

Technology policy, Privacy, and Bias


Pricing and Collusion


Advertising


